



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

16D

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,621	11/27/2001	Koichiro Nagar	Q66977	8241
23373	7590	12/15/2004	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				PUTTLITZ, KARL J
		ART UNIT		PAPER NUMBER
		1621		

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/993,621	NAGAR ET AL.	
	Examiner	Art Unit	
	Karl J. Puttlitz	1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### **Status**

- 1) Responsive to communication(s) filed on 07 September 2004.
- 2a) This action is **FINAL**.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### **Disposition of Claims**

- 4) Claim(s) 1,3-6,9-14,16,18 and 19 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 1,3-6,9,13,14,18 and 19 is/are allowed.
- 6) Claim(s) 10 is/are rejected.
- 7) Claim(s) 11,12 and 16 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### **Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 27 November 2001 is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### **Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    - Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    - Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### **Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/5/2004 has been entered.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3, 10-13, and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 fails to further limit claim 1 since all pipes (in claim 1) have a gradient.

Claims 10 and 13 recite that n is an average number of moles addee of the pxyalkylene group. However, the claim still does not indicated how many oxyalkylene groups are included. These claims also fail to recite the variable that is a number between 0 to 300.

Claim 16 fails to recite any steps regarding hoe the dehydration reaction product is used as a starting material for a production of a polymer.

Claim1 fails to recite the disclosed apparatus, therefore Applicant have failed to claim what they regard as the invention.

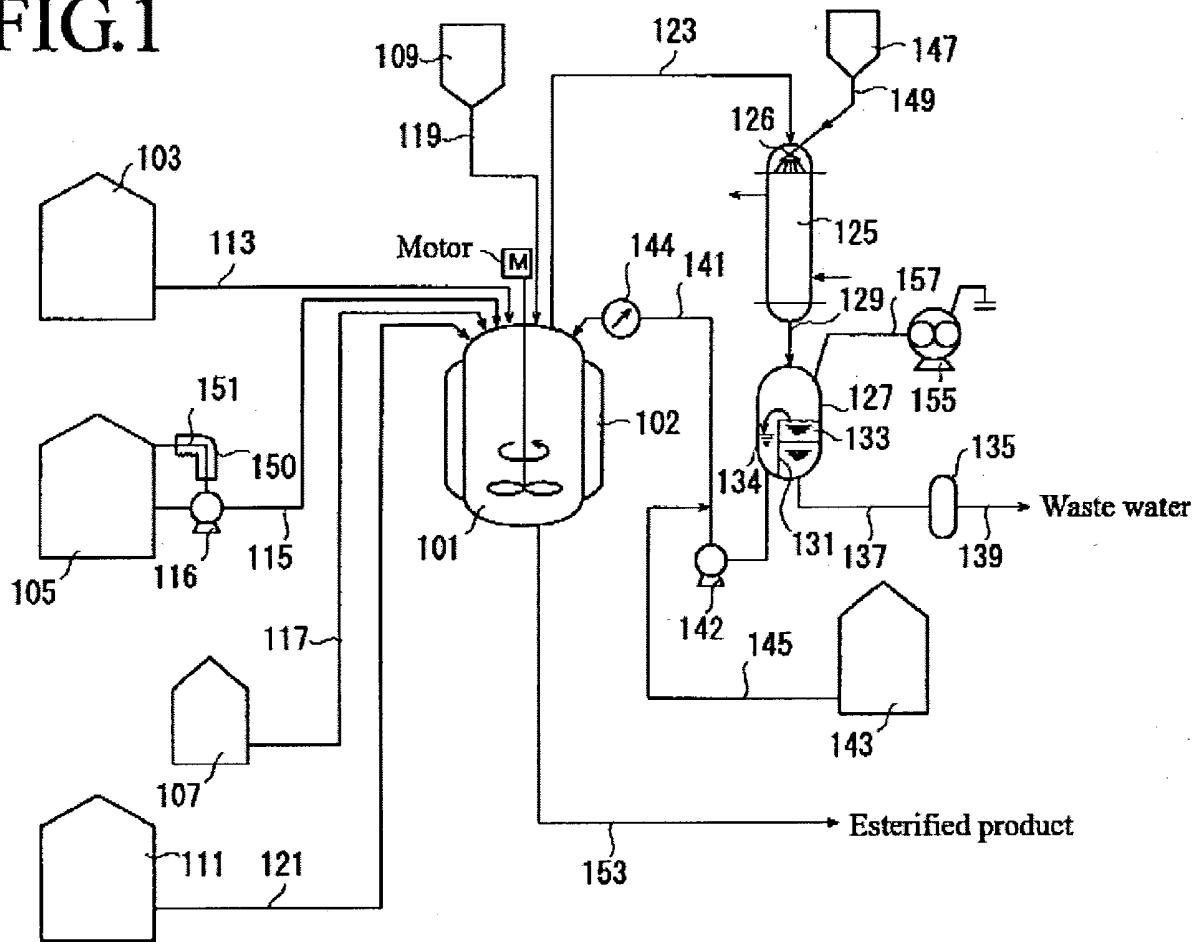
***Claim Rejections - 35 USC § 103***

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirata.

Hirata teaches a method for the production of an esterified product which comprises esterifying an alcohol with (meth)acrylic acid in a dehydrating solvent in the presence of an acid catalyst and a polymerization inhibitor. See description bridging columns 5 and 6.

Specifically, Hirata discloses an apparatus, as shown in FIG 1:

FIG.1



which is “(an apparatus) for expelling by distillation a distillate containing reaction-forming water to be formed during the esterification reaction in a reaction system (a reaction tank 101), condensing and liquefying the distillate while preventing the occurrence of gel, separating and removing the reaction-forming water, and returning the rest of the distillate at the solvent circulating speed defined above (not less than 0.5 cycle/hour, preferably in the range of 1 to 100 cycles/hour), a circulation system is provided therein for condensing and liquefying by the action of a antigelling agent a distillate occurring as an

azeotropic mixture of reaction-forming water and a dehydrating solvent, separating and removing the reaction-forming water (water phase) from the condensed and liquefied distillate, and refluxing the rest of the condensate (a solvent phase mainly containing the dehydrating solvent) back to the reaction tank 101 at the solvent circulating speed mentioned above. To be more specific, the upper part of the reaction tank 101 and the top part of the column of a vertical shell and tube type condenser 125 of the counterflow (or parallel flow) contact type are connected with a pipe 123. The lower bottom part of the condenser 125 and the upper part of a water separator 127 made of SUS are connected with a pipe 129. Inside the water separator 127, a partition plate 131 is formed." See paragraph bridging columns 19 and 20.

The difference between the process set forth in claim f and that disclosed by Hirata is that Hirata fails to explicitly state that the feed pipe has a gaseous phase section and a liquid phase section there within, and said feeding pipe having openings in the gaseous phase section and in the liquid phase section.

However, Those of ordinary skill would expect that the feed pipe has an inlet and an outlet (i.e. openings) and that some air or other gas would be in the pipe (i.e., gas and liquid phase sections). Therefore, given the broadest reasonable interpretation of the claims, these elements would be within the motivation of those of ordinary skill after a reading of Hirata.

***Allowable Subject Matter***

Claims 1, 3, 4-6, 9, 13, 14, 18 and 19 are allowed.

***Claim Objections***

Claims 11, 12, and 16 are objected to as being dependant on rejected claim 10.

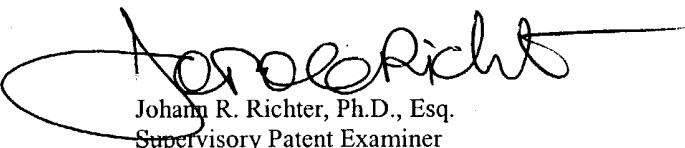
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl J. Puttlitz whose telephone number is (571) 272-0645. The examiner can normally be reached on Monday-Friday (alternate).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on (571) 272-0646.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

Karl J. Puttlitz  
Assistant Examiner

  
Johann R. Richter, Ph.D., Esq.  
Supervisory Patent Examiner  
Biotechnology and Organic Chemistry  
Art Unit 1621  
(571) 272-0646

